

cTVus*

RoHS-II

*not all articles

www.igus.de

TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

Overview

Bus system	Profibus	Interbus	CAN-Bus / Fieldbus
Part. No.	CFBUS.001 → CFBUS.003	CFBUS.010 & CFBUS.011	CFBUS.020 → CFBUS.022
Example drawing	(see the chapter belonging	(see the chapter belonging	(see the chapter belonging
	to the bus system for details)	to the bus system for details)	to the bus system for details)
Bus system	DeviceNet	CC-Link	Ethernet (CAT5 / CAT5e / GigE / PoE)
Part. No.	CFBUS.030 & CFBUS.031	CFBUS.035	CFBUS.040 → CFBUS.045
Example drawing			
	(see the chapter belonging to the bus system for details)	(see the chapter belonging to the bus system for details)	(see the chapter belonging to the bus system for details)
Bus system	Ethernet (CAT6 _A / PoE)	Ethernet (CAT7 / PoE)	FireWire 400 (IEEE1394a)
Part. No.	CFBUS.050	CFBUS.052	CFBUS.055
Example drawing	(see the chapter belonging	(see the chapter belonging	(see the chapter belonging
	(see the chapter belonging to the bus system for details)	(see the chapter belonging to the bus system for details)	to the bus system for details)
Bus system	Profinet (Type C)	USB 2.0	DVI
Part. No.	CFBUS.060	CFBUS.065 & CFBUS.066	CFBUS.070
Example drawing			
	(see the chapter belonging to the bus system for details)	(see the chapter belonging to the bus system for details)	(see the chapter belonging to the bus system for details)

Date	Author
11 May. 2016	C. Mittelstedt



TPE - e-chain $^{\rm @}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

Core design:

Conductor: Fine-wire strand in especially bending-stable version consisting of bare or

tinned copper wires (following DIN EN 60228).

Core insulation: According to bus specification. Core identification: According to bus specification.

Shield design:

Material: Extremely bending-stable braid or wrapping (055) made of tinned copper

wires.

Shield coverage: Linear: approx. 70 % Optical: approx. 90 %

Jacket design:

Inner jacket: TPE mixture adapted to suit the requirements in e-chains[®].

Low-adhesion mixture on the basis of TPE, especially abrasion-stable and Outer jacket: highly bending-stable, adapted to suit the requirements in e-chains®

• oil-resistant (following DIN EN 60811-2-1)

biooil-resistant (following VDMA 24568 (tested by DEA with Plantocut 8 S-MB))

flame-retardant (according to IEC 60332-1-2, CEI 20-35, VW-1, FT-1) (not CFBUS.070)

• hydrolysis-resistant (following DIN VDE 0282 Part 10 - A)

• microbe-resistant (following DIN EN 50396)

silicon-free (following PV 3.10.7 - status 1992) lead-free (following 2011/65/EU (RoHS-II))

clean room ISO class 1 (according to DIN ISO 14644-1 tested by IPA)

UV-resistance: Medium

Colour outer jacket: Red lilac (similar to RAL 4001) or

Yellow green (similar to RAL 6018) (only CFBUS.060)

"00000 m"* igus chainflex CFBUS.---[®] -----[®] E310776 c*Я*Jus AWM Cable marking (Black):

Style ----[®] VW-1 AWM I/II A/B 80°C ---V[®] FT-1 GL 61 937-14 HH

EAC/ CTP CE ---® conform RoHS-II conform www.igus.de

+++ chainflex cable works +++

* Length printing: Not calibrated. Only intended as an orientation aid.

① / ②: Cable identification according to part no. (see technical table for details).

Ex.: CFBUS.001: ⇒ ...igus chainflex CFBUS.001 (2x0,25)C E3107

③ / ④: Printing of the UL-Style / -Voltage (see chapter belonging to the cable).

Ex.: CFBUS.001: ⇒ ...Style 21371 VW

Printing: DESINA (only if DESINA-standard fulfilled).

ര: Printing according to bus specification (inclusive wave resistance).

Ex.: CFBUS.001: ⇒ ...CE 150 OHM Profibus conform...

General mechanical values:

(for individual details see technical table)

Guarai	Guaranteed lifetime for this series according to the "chainflex [®] guarantee club" conditions (see chainflex [®] catalogue and www.iqus.eu/chainflex-guarantee)					
Double strokes	*	5 million	7,5 million	10 million		
Temperature (from/to) [°C]			d by outer diameter (d)] bending radius 90,0 mm)			
	CFBUS.001 → CFBUS.045					
-35 / -25		12,5	13,5	14,5		
-25 / +60	≤ 400 m	10,0	11,0	12,0		
+60 / +70		12,5	13,5	14,5		
	CFBUS.050 → CFBUS.070					
-35 / -25		15,0	16,0	17,0		
-25 / +60	≤ 400 m	12,5	13,5	14,5		
+60 / +70		15,0	16,0	17,0		

[★]: Minimum guarantee lifetime of the cable under the specified conditions. The installation of the cable is recommended within the middle temperature range

Temperature range	-40 °C ←	-35 °C ←	-25 °C ←→ +60 °C	→ +70 °
Min. bending radius for fixed installation	12,5x d	10,0 x d	7,5 x d	10,0 x c
Torsion (at 1 m cable length)		±0°	±30 °	±0°

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

Date	Author	
11 May. 2016	C. Mittelstedt	

Please refer regarding the availability of the items especially the information in the latest chainflex catalogue.

Page 2/17





















c**FN**us

*not all articles

www.igus.de

TPE - e-chain $^{\circ}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

General electrical values:

(for individual details see technical table and chapter belonging to the cable)

Certifications: GL type approval certificate: No. 61 937-14 HH (not CFBUS.070)

Guidelines: CE, DESINA (not .060), NFPA (following 79-2012 chapter 12.9), EAC & TR

(CTP)

Dynamic values:

Max. speed

for e-chain[®] use:**

Unsupported: v = 10 m / s Gliding (up to 400 m): v = 6 m / s

Max. acceleration

for e-chain[®] use:** $a = 100 \text{ m/s}^2$

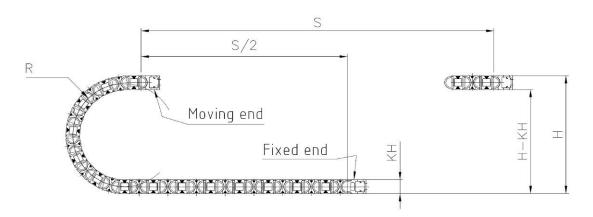
** These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

Typical lab test setup for this cable group:

Test bending radius R: approx. 60 - 125 mm
Test travel S: approx. 1 - 15 m

Test period: min. 2 - 4 million double strokes

Test speed: approx. 0.5 - 2 m/sTest acceleration: approx. $0.5 - 1.5 \text{ m/s}^2$



e-chain® - Bus cable for maximum load requirements:

- · especially abrasion-stable
- almost unlimited resistance to oil, also with biooils
- for unsupported travel distances and up to 400 m in gliding applications
- CE, RoHS-II, DESINA (not .060), cAJus (not CFBUS.070), GL type approval certificate (not CFBUS.070), NFPA, EAC & TR (CTP)

Typical application areas:

Indoor and outdoor applications without direct sun radiation.

Storage and retrieval units for high-bay warehouses, machining units / machine tools, quick handling, clean room, semiconductor insertion, indoor cranes, low-temperature applications.

Date	Author
11 May. 2016	C. Mittelstedt

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex® catalogue.





CTU_{US}

EHI CO

*not all articles

www.igus.de

TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

Technical tables:

Mechanical values:

① Part no.	② Number of cores & nominal cross section [mm²]***	External diameter (d)**** [max. mm]	Copper index [kg / km]	Weight [kg / km]
<u>Profibus</u>				
CFBUS.001	(2x0,25)C	9,0	34	86
CFBUS.002	(2x0,25)C+4x1,5	12,5	99	203
CFBUS.003	(2x0,25)C+3x0,75	11,5	58	141
<u>Interbus</u>				
CFBUS.010	(3x(2x0,25))C	9,0	50	90
CFBUS.011	(3x(2x0,25)+(3x1,0))C	10,5	88	142
CAN-Bus / Fig	<u>eldbus</u>			
CFBUS.020	(4x0,25)C****	6,5	29	58
CFBUS.021	(2x0,5)C	8,0	41	85
CFBUS.022	(4x0,5)C****	8,0	46	90
<u>DeviceNet</u>				
CFBUS.030	((2xAWG24)C+2xAWG22)C	7,5	37	65
CFBUS.031	((2xAWG18)C+2xAWG15)C	11,5	110	200
<u>CC-Link</u>				
CFBUS.035	(3xAWG20)C	9,0	46	94
Ethernet (CAT	5 / CAT5e / GigE / PoE)			
CFBUS.040	(4x0,25)C****	7,0	35	66
CFBUS.041	(4x(2x0,25))C	10,0	52	113
CFBUS.044	(4x(2x0,15))C	8,5	44	88
CFBUS.045	(4x(2x0,15))C	8,5	44	88
Ethernet (CAT	6 _A / PoE)			
CFBUS.050	(4x(2x0,15)C)C	10,5	87	139
Ethernet (CAT	7 / PoE)			
CFBUS.052	(4x(2x0,15)C)C	10,5	87	139
<u>FireWire</u>				
CFBUS.055	2x(2x0,15)C+2x(0,34)C	8,0	41	84
Profinet				
CFBUS.060	(4x0,38)C****	7,5	41	75
<u>USB</u>				
CFBUS.065	((2xAWG28)+2xAWG20)C	5,5	29	46
CFBUS.066	((2xAWG24)+2xAWG20)C	6,5	33	56
<u>DVI</u>				
CFBUS.070	(4x(2xAWG28)C+(2xAWG28)+3xAWG28)C	9,0	37	94

Date	Author
11 May. 2016	C. Mittelstedt

 $G\Rightarrow$ Cable contains a greenyellow core. External diameters are maximum values and may tend toward lower tolerance limits. Star quad design (see the chapter belonging to the cable for details).



TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

Electrical values:

Nominal cross section [mm²]	Conductor resistance [approx. Ω / km] at 20 °C	Max. current rating [A] at 30 °C*
(following)	DIN EN 50289-1-2	DIN VDE 0891-1
AWG28	205	1,0
0,15	133	2,5
0,25 (similar to AWG24)	79	5
0,34 (similar to AWG22)	58	7
0,38	51	7
0,5 (similar to AWG20)	44,1	10
0,75	28,6	14
1,0 (similar to AWG18)	22	17
1,5	14,6	21
AWG15	12,1	21

The max. current rating depends on factors such as the individual environmental conditions and the type of installation.



SULUS*

EHI CO

www.igus.de

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

Date Author
11 May. 2016 C. Mittelsto



TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.001 → CFBUS.003 (Profibus)

Shield: Extremely bending-stable braid made of tinned copper wires

Inner jacket: Pressure extruded, gusset filling TPE mixture

Outer jacket: Pressure extruded, flame-retardant TPE mixture

Filler: Plastic dummy

Filler: Plastic yarn

Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Shield foil: Copper clad plastic foil

- Banding: Plastic foil

Electrical values:

Nominal voltage: 50 V

Banding: Plastic fleece

Test voltage: 500 V (Core / Core & Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications: c \mathcal{H} Uus: (E310776: Style 1589 & 21371, 30 V / 80 °C) Characteristic wave resistance: 150 \pm 20 Ω ((at 3 MHz to 20 MHz) following DIN EN 50289-1-11)

Line attenuation {Signal pair} [approx. db / 100 m] (following DIN EN 50289-1-8)				
Frequency [MHz] 0,0096 0,0384 4 16				
CFBUS.00X	3	5	26	55

Construction table:

Part No.	Colou	r code	Cable construction
CFBUS.001	2x0,25	red, green	
CFBUS.002	(2x0,25)C	red/green	
	4x1,5	black cores with white numerals 1-4	
CFBUS.003	(2x0,25)C	red/green	
	3x0,75	black, blue, greenyellow	

(Back to overview or technical table)

y time. Date Author
11 May. 2016 C. Mittelstedt



www.igus.de





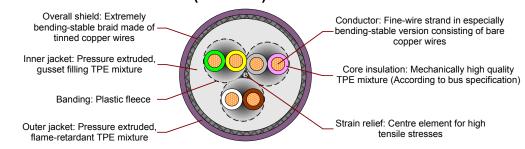
c Nus

*not all articles

www.igus.de

TPE - e-chain $^{\circ}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.010 & CFBUS.011 (Interbus)



Electrical values:

Nominal voltage: 50 V

Test voltage: 500 V (Core / Core & Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications:c \mathcal{H} Uus:(E310776: Style 1589 & 21371, 30 V / 80 °C)Characteristic wave resistance:100 \pm 10 Ω ((at 3 MHz to 20 MHz) following DIN EN 50289-1-11)

Construction table:

Part No.	Colou	r code	Cable construction
CFBUS.010	3x(2x0,25)	white/brown, green/yellow, grey/pink	
CERUS 011	3x(2x0,25)	white/brown, green/yellow, grey/pink	
CFBUS.011	(3x1,0)	red, blue, greenyellow	

(Back to overview or technical table)

Date	Author
11 May. 2016	C. Mittelstedt



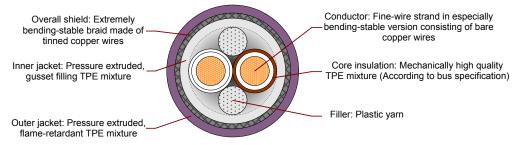
c Nus

*not all articles

www.igus.de

TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.020 → CFBUS.022 (CAN-Bus / Fieldbus)



Electrical values:

Nominal voltage: 50 V

Test voltage: 500 V (Core / Core & Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications: c \mathcal{H} Uus: (E310776: Style 1589 & 21371, 30 V / 80 °C) Characteristic wave resistance: 120 \pm 12 Ω ((at 3 MHz to 20 MHz) following DIN EN 50289-1-11)

Construction table:

Part No.		Colour code	Cable construction						
CFBUS.020	4x0,25	white, green, brown, yellow (star-quad stranding, pairs: white/brown & green/yellow)							
CFBUS.021	2x0,5	white, brown							
CFBUS.022	4x0,5	white, green, brown, yellow (star-quad stranding, pairs: white/brown & green/yellow)							

(Back to overview or technical table)

Date	Author
11 May. 2016	C. Mittelstedt

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

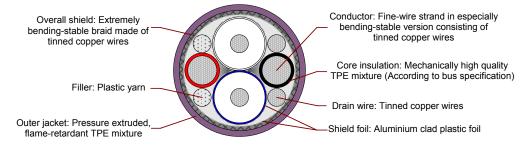
Please refer regarding the availability of the items especially the information in the latest chainflex® catalogue.

Page 8/17



TPE - e-chain $^{\circ}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.030 & CFBUS.031 (DeviceNet)



Electrical values:

Nominal voltage: 50 V

500 V (Core / Core & Core / Shield) Test voltage: (following DIN EN 50289-1-3)

Certifications: c*ЯU*us: (E310776: Style 1589 & 21371, 30 V / 80 °C) Characteristic wave resistance: 120 \pm 12 Ω ((at 3 MHz to 20 MHz) following DIN EN 50289-1-11)

Construction table:

Part No.		Colour code	Cable construction
CFBUS.030	(2xAWG24)C	white/blue	
(DROP/SPUR)	2xAWG22	red, black	
CFBUS.031	(2xAWG18)C	white/blue	
(TRUNK)	2xAWG15	red, black	

(Back to overview or technical table)

Date	Author
11 May. 2016	C. Mittelstedt

Please refer regarding the availability of the items especially the information in the latest chainflex® catalogue.

Page 9/17













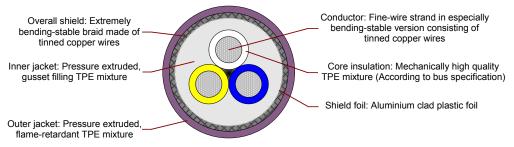






TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.035 (CC-Link)



Electrical values:

Nominal voltage: 50 V

Test voltage: 500 V (Core / Core & Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications:c \mathcal{H} Uus:(E310776: Style 1589 & 21371, 30 V / 80 °C)Characteristic wave resistance:110 \pm 11 Ω ((at 3 MHz to 20 MHz) following DIN EN 50289-1-11)

Construction table:

Part No.		Colour code	Cable construction
CFBUS.035	3xAWG20	white, blue, yellow	

(Back to overview or technical table)

Date Author
11 May. 2016 C. Mittelstedt

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex® catalogue.

Page 10/17

*not all articles



TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.040 \rightarrow CFBUS.045 (Ethernet (CAT5 [040]) (CAT5 [040]))

Overall shield: Extremely bending-stable braid made of tinned copper wires

Inner jacket: Pressure extruded, gusset filling TPE mixture

Strain relief: Centre element for high tensile stresses

Outer jacket: Pressure extruded, flame-retardant TPE mixture

U45 (Ethernet (CATSe / Gige / I

Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Shield foil: Aluminium clad plastic foil

Banding: Plastic fleece

Electrical values:

Nominal voltage: 50 V

Test voltage: 1,5 kV (Core / Core) & 1,0 kV (Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications: c \mathcal{H} us: (E310776: Style 10138 & 21235, 300 V / 80 °C) Characteristic wave resistance: 100 \pm 10 Ω ((at 1 MHz to 100 MHz) following DIN EN 50289-1-11)

	Line attenuation [approx. db / 100 m] (following DIN EN 50289-1-8)										
Frequency [MHz] Part no.	1	4	10	16	20	31,25	62,5	100			
CFBUS.040	3,2	6,5	9,9	12,3	13,8	17,7	25,7	33,0			
CFBUS.041	3,2	6,5	9,9	12,3	13,8	17,7	25,7	33,0			
CFBUS.044	4,2	8,6	13,7	17,2	19,2	23,7	32,7	40,5			
CFBUS.045	4,2	8,6	13,7	17,2	19,2	23,7	32,7	40,5			

Maximum lin	k length [†] [m]
Class D (Cat 5e → 100 MHz)	≤ 60

The specified max. link length is based on a direct connection (with two RJ45 connectors each with 0.8 db). Other configurations can affect the max. link length.

Construction table:

Part No.		Colour code	Cable construction
CFBUS.040	4x0,25	white, green, brown, yellow (star-quad stranding, pairs: white/brown & green/yellow)	
CFBUS.041	4x(2x0,25)	white/brown, green/yellow, grey/pink, blue/red	
CFBUS.044	4x(2x0,15)	white/brown, green/yellow, grey/pink, blue/red	
CFBUS.045	4x(2x0,15)	whiteblue/blue, whiteorange/orange, whitegreen/green, whitebrown/brown (According to EIA/TIA 568)	

(Back to overview or technical table)

Date Author
11 May. 2016 C. Mittelstedt







TPE - e-chain $^{\circ}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

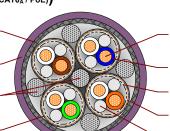
CFBUS.050 (Ethernet (CAT6A / POE))

Overall shield: Extremely bending-stable braid made of tinned copper wires

Outer jacket: Pressure extruded flame-retardant TPE mixture

Strain relief: Centre element & filler for high tensile stresses

Element shield: Extremely bending-stable braid made of tinned copper wires



Conductor: Fine-wire strand in especially bending-stable version consisting of bare copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Element shield foil: Copper clad plastic foil

Element bending: 2 layer gliding PTFE-foil, wrapped in opposite directions

Filler: Plastic dummy

Electrical values:

Nominal voltage: 50 V

1,5 kV (Core / Core) & 1,0 kV (Core / Shield) Test voltage:

(following DIN EN 50289-1-3)

Certifications: c*ЯU*us: (E310776: Style 10138 & 21235, 300 V / 80 °C) 100 \pm 15 Ω ((at 1 MHz to 500 MHz) following DIN EN 50289-1-11) Characteristic wave resistance:

Frequency [MHz] Part no.	11	4	10	16	20	31,25	62,5	100	150	200	250	350	500
	Characteristic wave resistance Z_U [Ω] (following IEC 61156-6, part 6.3.10)												
CFBUS.050	82	87	89	89	89	87	83	80	77	74	72	68	64
	Characteristic wave resistance Z _o [Ω] (following IEC 61156-6, part 6.3.10)												
CFBUS.050	122	115	112	112	112	115	120	125	131	136	140	148	158
Line attenuation [approx. db / 100 m] (following DIN EN 50289-1-8)													
CFBUS.050	2,5	5,0	8,1	10,5	11,7	14,7	21,4	27,6	34,3	40,0	44,9	56	75

Maximum lin	k length [©] [m]
Class E_A (Cat $6_A \rightarrow 500 \text{ MHz}$)	≤ 45

The specified max. link length is based on a direct connection (with two RJ45 connectors each with 0.8 db). Other configurations can affect the max. link length.

Construction table:

Part No.		Colour code	Cable construction
CFBUS.050	4x(2x0,15)C	white/blue, white/orange, white/green, white/brown	

(Back to overview or technical table)

Date	Author
11 May. 2016	C. Mittelstedt



c Nus









*not all articles



www.igus.de



TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

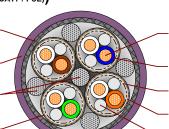
CFBUS.052 (Ethernet (CAT7 / POE))

Overall shield: Extremely bending-stable braid made of tinned copper wires

Outer jacket: Pressure extruded flame-retardant TPE mixture

Strain relief: Centre element & filler for high tensile stresses

Element shield: Extremely bending-stable braid made of tinned copper wires



Conductor: Fine-wire strand in especially -bending-stable version consisting of bare copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Element shield foil: Copper clad plastic foil

Element bending: 2 layer gliding PTFE-foil, wrapped in opposite directions

Filler: Plastic dummy

Electrical values:

Nominal voltage: 50 V

Test voltage: 1,5 kV (Core / Core) & 1,0 kV (Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications:

c*ЯU*us: (E310776: Style 10138 & 21235, 300 V / 80 °C)

Frequency [MHz] Part no.	1	4	10	16	20	31,25	62,5	100	200	300	400	500	600
Characteristic wave resistance Z _U [Ω] (following IEC 61156-6, part 6.3.10)													
CFBUS.052	82	87	89	89	89	87	83	80	74	70	66	64	61
	Chara	cterist	ic wave	resista	ance Zo	[Ω] (fo	llowing	IEC 61	156-6,	oart 6.3	.10)		
CFBUS.052	122	115	112	112	112	115	120	125	136	144	151	158	164
Line attenuation [approx. db / 100 m] (following DIN EN 50289-1-8)													
	LI	ie attei	luation	Labbio	A. G.D.		(,			

Maximum link length® [m]							
Class F (Cat 7 → 500 MHz)	≤ 45						

The specified max. link length is based on a direct connection (with two RJ45 connectors each with 0.8 db). Other configurations can affect the max. link length.

Construction table:

Part No.		Colour code	Cable construction
CFBUS.052	4x(2x0,15)C	white/blue, white/orange, white/green, white/brown	

(Back to overview or technical table)

Date	Author
11 May. 2016	C. Mittelstedt



c Nus

RoHS-II

*not all articles



Element bending: Plastic foil

TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.055 (FireWire 400 (IEEE1394a))

Outer jacket: Pressure extruded, gusset filling, flame-retardant TPE mixture

Element shield: Extremely bending-stable wrapping made of tinned copper wires

Filler: Plastic dummy

Conductor: Fine-wire strand in especially bending-stable version consisting of tinned or bare copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Element shield foil: Copper clad plastic foil Element bending: 2 layer gliding PTFE-foil, wrapped in opposite directions

Electrical values:

Nominal voltage: 50 V

Test voltage: 500 V (Core / Core & Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications: c \mathcal{H} Uus: (E310776: Style 1589 & 21371, 30 V / 80 °C) Characteristic wave resistance: 100 \pm 15 Ω ((at 1 MHz to 250 MHz) following DIN EN 50289-1-11)

	Line attenuation [approx. db / 100 m] (following DIN EN 50289-1-8)										
Frequency [MHz] Part no.	1	4	10	16	20	31,25	62,5	100	155	200	250
CFBUS.055	3,4	6,4	9,9	12,5	14,1	17,7	25,5	32,9	41,8	48,1	54,5

Construction table:

Part No.		Colour code	Cable construction
CFBUS.055	2x(2x0,15)C	orange/blue, green/red	
5. 256.000	2x(0,34)C	white, black	

(Back to overview or technical table)

Date Author
11 May. 2016 C. Mittelstedt

c Us

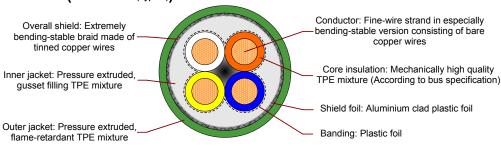
RoHS-II

*not all articles



TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.060 (Profinet (Type C))



Electrical values:

Nominal voltage: 50 V

Test voltage: 1,5 kV (Core / Core) & 1,0 kV (Core / Shield)

⇒ (following DIN EN 50289-1-3)

	Line attenuation [approx. db / 100 m] (following DIN EN 50289-1-8)									
Frequency [MHz] Part no.	1	4	10	16	20	31,25	62,5	100		
CFBUS.PUR.060	2,4	4,8	7,6	9,6	10,7	13,4	19,0	24,0		

Maximum link length [♦] [m]							
Class D (Cat 5e → 100 MHz)	≤ 90						

The specified max. link length is based on a direct connection (with two RJ45 connectors each with 0.8 db). Other configurations can affect the max. link length.

Construction table:

Part No.		Colour code	Cable construction
CFBUS.060	4x0,38	white, orange, blue, yellow (star-quad stranding, pairs: white/blue & orange/yellow)	

(Back to overview or technical table)

Date Author
11 May. 2016 C. Mittelsted



c Nus















www.igus.de



c Nus

*not all articles

www.igus.de

TPE - e-chain[®] - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

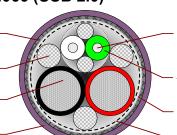
CFBUS.065 & CFBUS.066 (USB 2.0)

Overall shield: Extremely bending-stable braid made of tinned copper wires

Filler: Plastic string

Conductor: Fine-wire strand in especially bending-stable version consisting of tinned copper wires

Outer jacket: Pressure extruded, flame-retardant TPE mixture



Conductor: Fine-wire strand in especially bending-stable version consisting of silvered (065) or bare (066) copper wires

Core insulation: Mechanically high quality TPE mixture (According to bus specification)

Shield foil: Aluminium clad plastic foil

Banding: Plastic foil

Electrical values:

Nominal voltage: 50 V

Test voltage: 500 V (Core / Core) & 500 V (Core / Shield)

⇒ (following DIN EN 50289-1-3)

Certifications: c \mathcal{F} *U*us: (E310776: Style 1589 & 21371, 30 V / 80 °C)

Characteristic wave resistance: $95 \pm 10 \Omega$ ((at 1 MHz to 400 MHz) following DIN EN 50289-1-11)

Line attenuation {Signal pair} [approx. db / 100 m] (following DIN EN 50289-1-8)									
Frequency [MHz] Part no.	1	4	8	12	24	48	96	200	400
CFBUS.065 / .066	5	9	12,5	14,5	22	32	50	75	116

Construction table:

Part No.		Colour code	Cable construction
CFBUS.065	(2xAWG28)	white/green	
GI BUS.003	2xAWG20	red, black	
CERUS 066	(2xAWG24)	white/green	
CFBUS.066	2xAWG20	red, black	

(Back to overview or technical table)

Date Author
11 May. 2016 C. Mittelstedt

Subject to misprints and errors. Technical modifications are possible at any time. Maybe older batches do not have all or other features.

Please refer regarding the availability of the items especially the information in the latest chainflex® catalogue.

Page 16/17

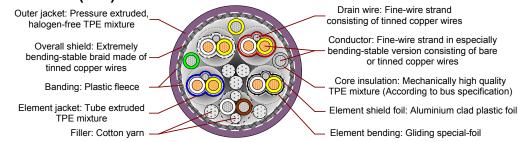
regarding the availability of the items especially the informat





TPE - e-chain $^{\circ}$ - Bus cable for maximum load requirements (class 6.6.4): shielded, oil- and biooil-resistant, flame-retardant (not CFBUS.070) as well as hydrolysis- and microbe-resistant.

CFBUS.070 (DVI)



Electrical values:

Nominal voltage: 50 V

1,0 kV (Core / Core) & 300 V (Core / Shield) Test voltage:

(following DIN EN 50289-1-3)

Operating capacity: approx. 40 pF / m ((at 1 kHz) following DIN EN 50289-1-5) Characteristic wave resistance: 100 \pm 10 Ω ((at 100 MHz) following DIN EN 50289-1-11)

Construction table:

Part No.	Colour code		Cable construction
CFBUS.070	4x(2xAWG28)C	C: white/yellow EJ: blue, white, red, black	0
	C: Cores / EJ: Element jackets		
	(2xAWG28)	white/brown	
	3xAWG28	green, yellow, grey	

(Back to overview or technical table)



c Us











*not all articles

www.igus.de